

STATEMENT OF LEGAL AND FACTUAL BASIS

KTI Energy of Martinsville, Inc.
Martinsville, Virginia
Permit No. VA-30826
Permit Date: October 29, 2001
AIRS ID No. 51-089-0083

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, KTI Energy of Martinsville, Inc. has applied for a Title V Operating Permit for its Ridgeway facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

FACILITY INFORMATION

<u>Permittee</u>	<u>Facility</u>
KTI Energy of Virginia, Inc. P. O. Box 717 Ridgeway, Virginia 24148	KTI Energy of Martinsville, Inc. At the intersection of Lester Street and Commonwealth Boulevard Martinsville, Virginia

SOURCE DESCRIPTION

SIC Code: 4961 – sale of steam for industrial purposes. This facility, formerly named “Multitrade of Martinsville, Inc.”, operates one 120 x 10⁶ Btu/hr (heat input) wood/coal-fired spreader stoker boiler for the purpose of providing steam for sale to customers in the area.

The facility is a Title V major source of sulfur dioxide, nitrogen oxides and carbon monoxide. It is located in an attainment area for all pollutants, and is a PSD minor source. The boiler is subject to NSPS Subpart Db requirements. The facility was previously permitted under a minor NSR Permit

KTI Energy of Martinsville, Inc.

VA-30826

October 29, 2001

Statement of Basis

Page 2

dated July 24, 1987, which was amended on November 30, 1987 and May 24, 1988, and superseded by a new permit dated April 23, 1999.

COMPLIANCE STATUS

The facility is inspected once a year, and is currently considered in compliance.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following :

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
1	EP1	Keeler Dorr-Oliver water tube boiler/steam generator, installed in 1987	120 x 10 ⁶ Btu/hr (heat input)	Zurn multicyclone	EP 1/1	PM-10	April 23, 1999
				PPC Industries electrostatic precipitator (2 fields, 24 sections)	EP 1/1		

*The Size/Rated capacity and PCD efficiency is provided for informational purposes only, and is not an applicable requirement.

EMISSIONS INVENTORY

PLANTWIDE EMISSIONS SUMMARY [TONS PER YEAR]		
CRITERIA POLLUTANTS	POTENTIAL EMISSIONS	1998 ACTUAL EMISSIONS
Particulate Matter (PM ₁₀)	52.5	9.8
Nitrogen Oxides (NO _x)	209.1	109.6
Sulfur Dioxide (SO ₂)	205.6	39.8
Carbon Monoxide (CO)	233.6	161.7
Volatile Organic Compounds (VOC)	81.8	8.5

EMISSION UNIT APPLICABLE REQUIREMENTS – Emission Unit 1, Keeler Dorr-Oliver boiler

Limitations

The following applicable limitations are State BACT requirements from the minor NSR permit issued on April 23, 1999, which superseded the permit dated July 24, 1987, as amended on November 30, 1987 and May 24, 1988. Some of the applicable limitations are also derived from 40 CFR Part 60, Subparts A and Db; these citations are noted in brackets following the conditions below. A copy of the permit is attached as attachment B:

Condition 1, specifying that the requirements of 40 CFR 60 Subpart Db apply to the boiler.

Condition 2, specifying that particulate emissions from the boiler shall be controlled by the use of a multicyclone followed by one (1) electrostatic precipitator (ESP).

Condition 3, limiting the approved fuels for the boiler to wood and coal, excluding any wood which contains chemical treatments or has affixed thereto paint and/or finishing materials or paper or plastic laminates.

Condition 4, limiting the maximum heat input of the boiler to 120×10^6 Btu/hr.

Condition 5, limiting the maximum sulfur content of the coal to be burned in the boiler to 0.9 percent by weight per shipment.

Condition 6, limiting the maximum annual sulfur content of the coal to be burned in the boiler to 0.8 percent by weight.

Condition 7, limiting the consumption of coal to 11,680 tons per year.

Condition 8, limiting the consumption of wood to 116,800 tons per year.

Condition 9, specifying that the annual capacity factor shall be less than or equal to 30% (0.30) for coal. [40 CFR ' 60.42b(d)(1)]

Condition 10, limiting emissions as follows:

Total Suspended Particulate	12.0 lbs/hr 0.1 lbs/million BTU input	52.5 tons/yr
PM-10	12.0 lbs/hr 0.1 lbs/million BTU input	52.5 tons/yr
Sulfur Dioxide	159.0 lbs/hr 1.2 lbs/million BTU input (30-day rolling average)	205.6 tons/yr
Nitrogen Oxides (as NO ₂)	72.0 lbs/hr 0.6 lbs/million BTU input (30-day rolling average)	209.1 tons/yr
Carbon Monoxide	53.3 lbs/hr 0.44 lbs/million BTU input	233.6 tons/yr
Volatile Organic Compounds	18.7 lbs/hr 0.16 lbs/million BTU input	81.7 tons/yr

[40 CFR ' 60.42b(d), 40 CFR ' 60.43b(a)(2), and 40 CFR ' 60.44b(c)]

Condition 11, limiting visible emissions from the boiler stack to 20 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 27 percent opacity as determined by EPA Method 9 (reference 40 CFR 60 Appendix A). [40 CFR ' 60.43b(f)]

Monitoring

The monitoring requirements in the NSR permit have been modified to meet Part 70 requirements. The permittee will operate a continuous emission monitoring system (CEMS) to monitor the boiler's NO_x and SO₂ emissions as well as visible emissions, as required by 40 CFR ' 60.47b and ' 60.48b. The permittee will also operate a continuous steam flow monitoring system (CSFMS) consisting of a steam flow meter and continuous recorder to monitor the steam flow to each customer from the boiler, and will use this data in combination with daily fuel logs to determine compliance with the maximum heat input of the boiler.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include daily, monthly and annual throughput of wood and coal (in tons) for the boiler, by fuel type and HHV of each fuel; annual wood and coal capacity factors; all coal shipments purchased, indicating the sulfur and ash content of each coal shipment; annual sulfur and ash content of the coal received; pollutant-specific emission factors (F-factors) used for the purpose of calculating actual emission rates and the equations used in those calculations; continuous steam flow monitoring records for all customers; records of malfunctions and of reports required by 40 CFR 60 Subpart Db and 40 CFR 60 Subpart A; and written operating procedures, written maintenance procedures, training records of all operators of process equipment or air pollution control equipment, scheduled and non-scheduled maintenance, hours of operation, malfunctions, and soot-blowing for the boiler and air pollution-related equipment.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

The permit includes quarterly NSPS reporting requirements required under 40 CFR 60.49b.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual

monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upsets, within one business day.

INAPPLICABLE REQUIREMENTS

40 CFR 60.42b(a) is not currently applicable. Instead of this 90% SO₂ reduction requirement, 40 CFR 60.42b(d)(1) applies due to the annual capacity factor being limited to 0.30 for coal. (See “Limitations”, Condition 9, above.)

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (9 VAC 5-80-720 B)	Rated Capacity (9 VAC 5-80-720 C)
2a	wood handling system	5-80-720 B.1	PM-10	
2b	coal handling system	5-80-720 B.1	PM-10	
3	ash handling system	5-80-720 B.1	PM-10	
4	wood storage pile	5-80-720 B.1	PM-10	

¹The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed insignificant activity, not included in permit application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

KTI Energy of Martinsville, Inc.

VA-30826

October 29, 2001

Statement of Basis

Page 8

The draft permit was placed on public notice in the Martinsville Bulletin on Tuesday, July 17, 2001.

During the public comment period, comments were received from EPA. All comments were addressed in the proposed permit and proposed statement of basis dated August 17, 2001, and have been carried over into the issued permit.